The variability in wing neuration of Arenipses sabella Hampson, 1901 (Lepidoptera, Pyralidae)

by

R. H. KLEINPASTE

Department of zoology, Agricultural University, Wageningen

ABSTRACT. — It has been shown that in *Arenipses sabella* Hampson there is a considerable variability in the pattern of wing venation. This variability appears to be greater in females than in males. It is concluded that this intraspecific variation creates difficulties for the classification of the Galleriinae (the subfamily of the Pyralidae to which *sabella* belongs), because the latter is mainly based on the patterns of wing venation.

Thus far the study of the variability of wing venation in Lepidoptera has been hardly developed. In my opinion there is a necessity to pay special attention to this variability in those taxonomic groups in which the classification is primarily based on configuration of the wing venation e.g. the subfamily Galleriinae of the Pyralidae (Hampson, 1917).

During a stay at the British Museum (Natural History) in London last year, I had the opportunity to study the intraspecific variability in wing venation in *Arenipses sabella* Hampson. This species occurs in the southern Mediterranean area and the Middle East. It has been described by Hampson (1901: 501) from Arabia. From literature it is known that the larvae mainly feed on dates both in the palmtrees and in the stored product (Buxton, 1920). Transport of dried dates all through the world may therefore spread *sabella* everywhere.

Venation of the males. Examined: 20 specimens.

A. Forewing. The general pattern is shown in fig. 1a. The large cell, which is clothed with fine silky hair on the underside, is produced to a point at vein 5. All twelve veins were always present but vein 5 was sometimes inconspicuous. Vein 10 can rise from nearly any point in between vein 11 and the stalk of the complex 7, 8 and 9. The two extremes are shown in fig. 1b by dashed lines.

B. Hindwing. In the hindwings of the males of *sabella* vein 5 is absent. In these wings the neuration shows more variation than the neuration in the forewings. 16 specimens (80%) showed a configuration of vein 6 as presented in fig. 1c, while 4 specimens (20%) showed a configuration as drawn in fig. 1d. Moreover, vein 3 has a variable length, as it varies in point of rising from vein 4. Fig. 1c and 1d also show the two extremes in length that have been found.

Venation of the females. Examined: 20 specimens.

A. Forewing. The forewings of the females of *sabella* show all twelve veins. The pattern of neuration appeared to be extremely variable. Taking vein 6, two extremes and one "intermediate situation" have been indicated. Vein 6 can be stalked with the veins 7, 8 and 9 and consequently does not rise from the cell (fig. 2a). This configuration was found in 12 females (60%). Vein 6 can also rise from the cell at the same point from which the stalk of veins 7, 8 and 9 rises (fig. 2b). The other extreme consists of vein 6 rising from the cell separately from the stalk of veins 7, 8 and 9 (fig. 2c); the latter configuration occurred in 7 specimens (35%). Only one "intermediate form" was found. I never observed the cell entirely closed. Veins 4 and 5 both rise from the cell either from one point (fig. 2d) or from two separate points (fig. 2e), the former configuration being found as often as the latter. One of the females showed a configuration in which vein 11 does not rise from the cell, but is stalked with vein 10 (fig. 2f).

B. Hindwing. The hindwing venation of the females of *sabella* is drawn in fig. 2g. The neuration shows hardly any variability, apart from very small differences in length of vein 3. The variability of the length of the stalk, indicated in fig. 2g as (p-q), deserves closer attention. Its varying length is mainly due to the convergence of point p on point q, without actually touching point q. Apparently the venation of the females of *sabella* shows more variation when compared to the males.

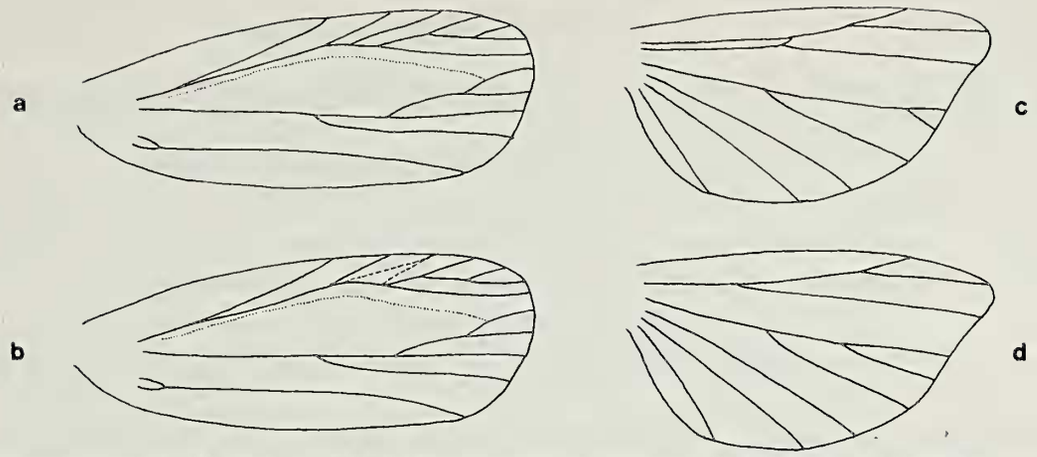

Fig. 1. *Arenipses sabella* Hampson. ♂. Explanation: see text. a-b. Patterns of forewing venation. c-d. Patterns of hindwing venation.

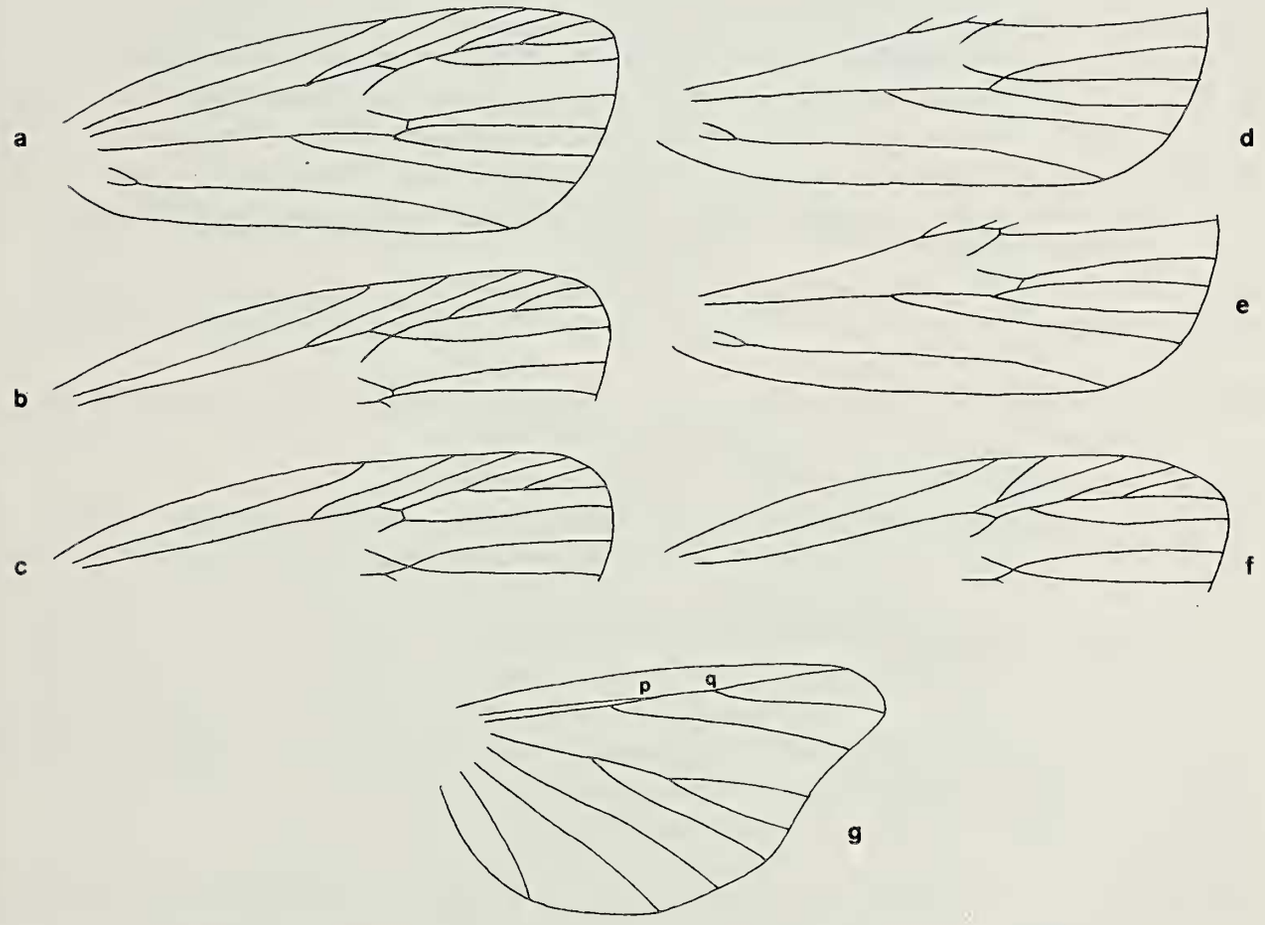

Fig. 2. *Arenipses sabella* Hampson. ♀. Explanation: see text. a-f. Patterns of forewing venation. g. Pattern of hindwing venation.

The variability in neuration as described in this paper is a general feature among the North West European species belonging to the subfamily of the Galleriinae (Kuchlein & Kleinpaste, 1977, in press). This makes it extremely difficult to maintain many of the distinguishing marks of venation as significant features on generic or specific level. Apparently the existing keys in the handbooks do not hold for a considerable fraction of the populations!

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